



R. Buckley



A. E. Britten



Ph. O. de Souza

Buckley, Britten Promovi pa Shift Foreman; De Souza Ta Avanza pa Engineering Technician

Efectivo Januari 1, 1976, Ramon Buckley y Adelbertus (Betty) E. Britten a recibi promocion pa Shift Foreman den HDS Division, mientras Philip O. de Souza a avanza pa Engineering Technician den Mechanical Engineering Division di Departamento Tecnico.

Ramon a drenta servicio di Lago ariba September 15, 1954 como un Junior Clerk den Oficina di Process-Cracking. El a progresa pa Process Clerk II den Catalytic & Light Ends na 1961. Siguientemente el a ser asigná den e unidadnan di proceso como Levelman na 1964 y a bira un Assistant Operator na 1966 den Fuels Division. El a ser promoví pa Operator na 1971 y a traha como Panel Operator den Refining Operations Center (ROC). Tambe el tabata activamente involvi den startmento di e unidadnan di HDS-1.

For di October 1973 te December 1974, Ramon tabata ariba un asignacion ultramar na Fawley Refinery di Esso Petroleum Co., Ltd. cerca di Southampton, na Inglaterra, na unda el a asisti den startmento di e plantanan hydrofiners, MEA units, plantanan di azufre y otro facilidatnan di e refineria.

Un graduado for di St. Dominicus College cu diploma MULO-A, Ramon a tuma cursonan di Ingles y Typemanto na Lago.

Den su ora liber, Ramon ta gusta scucha musica y e tin un set di stereo completo. Siendo un ex-beisbolista di Marlboro y di e seleccion Antiliano, ainda el ta activo den softball y ta

hunga pa e subcampeonnan di Aruba, Casa Haime.

Ramon y su esposa Ifania tin dos yiu muher, di 8 y 4 anja y un yiu homber di 13 anja. Nan ta biba na Oranjestad.

BETTY BRITTEN a principia na Lago ariba September 25, 1950 como un estudiante di School di Ofishi di Lago den e anterior Industrial Relations Department. Despues di a gradua, el a ser asigná den Cracking Department na 1953 como un Process Helper D.

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Steve Macmanus Becomes Lago's Controller; Succeeds Tom Keevan Effective February 1

Effective Februari 1, 1976, Stephen (Steve) P. Macmanus will succeed Controller Tom J. Keevan as Lago's Controller. Mr. Keevan, who has been Lago's Controller since 1969, will assume the position of Controller of International Petroleum, Ltd. in Bogota, Colombia.

Prior to joining Lago, Mr. Macmanus had been Financial Manager of Esso Standard Oil Co. S.A. (Uruguay) in Montevideo since March 1975. He began his Exxon career on June 14, 1968 in the Controller's Department of Exxon's New York office. Subsequently, he was assigned as Systems Analyst in the Humble Headquarters and later worked at the Central America Controller's Department of Esso Standard Oil S.A. Ltd. in San Salvador as

Otilio Franken Assigned As Supervisor for Startup Of HDS at Esso Belgium

Another Lago employee to go on a temporary overseas assignment is Otilio Franken, ■ Shift Foreman in the HDS Division, who left for the Esso Belgium refinery in Antwerp on January 8. He was accompanied by his wife Braula and three of their four sons, Rudy Roland (19), Nestor Nikito (15), and Oscar Otilio (10). Their eldest son, Franklin (20), will join them later after taking his Secondary Technical School (MTS) exams.

Otilio will assist Esso Belgium for about one year as Controlhouse Supervisor for the startup of the Vacuum Pipestill, Gas Oil Hydrofiner, MEA units and Sulfur Plants which will be put into operation as part of their new HDS facilities. At Esso Belgium, Otilio will join Lago's Process Foreman Julio Curiel who is on an overseas assignment there since June 1975 to assist as startup supervisor for several of the units of the new HDS complex of the Antwerp refinery.

A Shift Foreman since September 1971, Otilio has process experience on all HDS units at Lago. He assist-

(Continued on page 2)



S. P. Macmanus

MCS Coordinator.

In 1972 he transferred to Esso Inter-America (EIA) Headquarters ■■ Adviser in the Controller's Accounting Research & Practices Division and later

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Otilio Franken and his family leaving for Esso Belgium in Antwerp.
Otilio Franken y su familia la sali pa Esso Belgica na Antwerpen.

Otilio Franken a Ser Asigna Como Supervisor Pa Startmento di Unidadnan HDS na Esso Belgica

Un otro empleado di Lago cu a wor-
du asigná temporalmente den extran-
jeria ta Otilio Franken, un Shift Fore-
man den Division di HDS, cu a sali pa
e refineria di Esso Belgica na Ant-
werpen dia 8 di Januari. El a wordu
acompañá pa su esposa Braula y 3
di nan 4 yiu homber, Rudy Roland (19
anja), Nestor Nikito (15 anja) y Oscar
Otilio (10 anja).

Nan yiu homber major Franklin (20
anja) lo reuni cu nan despues di pasa
su MTS-examen.

Otilio lo asisti Esso Belgica pa mas
o menos 1 anja como Controlhouse
Supervisor di e Vacuum Pipestill, Gas
Oil Hydrofiner, unidadnan di MEA y e
plantanan di Azufre cual lo wordu pon-
ní na funcionamiento como parti di
nan facilidadnan desulfurador HDS
nobo. Na Esso Belgica Otilio lo tra-
ha hunto cu Lago Process Foreman
Julio Curiel cu ta aya ariba su asigna-
cion den extranjeria desde Juli 1975
como supervisor pa startmento di dife-
rente unidadnan di e complex nobo
di e refineria di Antwerpen.

Siendo un Shift Foreman desde
September 1971, Otilio tin experien-
cia den tur unidadnan di HDS di La-

go. El a asisti den startmento di tur
e plantanan di Lago su HDS-I y HDS-
II. El a sigi un curso pa simulacion
di operacion di plantanan desulfura-
dor na Florham Park, N. J. Tambe el
a sigi cursonan di Process Training y
DDC-Control na Lago. E tabata Main-
tenance Coordinator pa e planta HDS-
I y recientemente e tabata Process
Foreman encargá cu e Unidatnan Va-
cuum, e Plantanan di Azufre y e Uni-
dadnan MEA di Lago su HDS com-
plex.

Franken Assigned

(Continued from page 1)

ed in the startup of all the units of
Lago's HDS-I and HDS-II facilities. He
also followed an HDS simulation cour-
se at Florham Park, N.J., and took the
Process Training and DDC-Control
courses at Lago. He had been e
Maintenance Coordinator for the
HDS-I units and most recently was an
acting Process Foreman in charge of
the Vacuum units, Sulfur plants and
MEA units of Lago's HDS complex.

Trahadornan di Mechanical Y Dok Ta Usa e Comedor Mas Espacioso di Lago

Situá zuid-oost di Porta # 2, cer-
ca waya di haaf y canto di camina
principal di refineria, ta e "lunch
shelter" mas grandi den refineria.
Awor yamá Finger Pier Lunch Shel-
ter, e edificio aki anteriormente taba-
ta ser usá como Garage pa Trucknan
di Paga Candela cual tabata inclui
un cuarto cu kashi pa personal di ga-
rage. For di un lugar parcialmente
habrí y cubrí cu un dak, e edificio
aki a ser renobá anja pasá y conver-
ti den un comedor y cuarto cu kashi
pa asina crea un ambiente mas con-
veniente y mehor pa trahadornan den
planta di Mechanical y personal di
Dok cu ta traha den e distrito ey.

Pa logra e propósito aki, e parti
habrí di e edificio a ser cerrá cu
blokki y dos porta cu glas a ser in-
stalá pa dreña den e parti di come-
dor. Bentananan existente e ser mo-
dificá pa permiti instalacion di uni-
dadnan pa airecondicionado, mien-
tras cu e murayanan, kozijnnan di
porta y vloer e ser re-condicioná y
geverf.

E sala di comedor espacioso awor
tin seis mesa largo, cu lugar pa se-
senta persona por sinta. Canto di
un muraya tin un careda di kashi cu-
brí cu formica bèrdè, cu lugar pa po-
ne "hot plates" of canica pa koffi;
un water cooler; un baki pa laba coi'
kibra y dos labamano caminda em-
pleadonan por laba nan man promer
cu nan sinta come, y un spiel na mu-
raya.

Un nevera pronto lo ser instalá
canto di e muraya aki. Canto di e
muraya na otro banda tin sesenta ka-
shi unda empleadonan por warda nan
saco di cuminda, thermo, bleki di
koffi y otro efectonan personal.

Banda di e comedor, pero cu en-
tradanan separá for di pafor, tin dos
cuarto cu locker caminda empleado-
nan por cambia di panja limpi pa
panja di trabao y warda algun otro
cosnan di uso personal.

Renobacion di e Finger Pier Lunch
Shelter ta parti di Lago su esfuerzo-
nan continuo pa mehora ambiente di
trabao. Tin otro facilidadnan similar
mas chikito, algun di nan combiná cu
oficina, den varios parti di refineria.
Unda cu ta necesario — pa motibo
di problemanan ambiental — e come-
dornan aki a ser airecondicioná.
Ademas di e facilidadnan permanen-
te aki, tin un trailer-comedor esta-
cioná unda cu tin un gran concentra-
cion di actividad durante trabaonan
di revision y reparacion of otro pro-
yectonan.



M. Christiaans



B. A. Kalis

M. Christiaans, B. Kalis Join Technical Department As Engineers Early January

On January 7, 1976, Mariano Christiaans joined Lago as an engineer in the Technical Department's Mechanical Engineering Division. Mariano graduated from Tulane University in December last year with a Bachelor's degree in Mechanical Engineering.

He is a graduate of St. Augustinus College of San Nicolas and also studied at Colegio Arubano. He worked for various local firms before entering Tulane University in 1971, where he studied initially with a Teagle Scholarship and then with a Lago Scholarship Foundation grant in his final year.

Mario will initially be assigned to the Technical Services Section where he will be able to apply his mechanical engineering expertise to help solve some of the day-to-day problems associated with equipment operation.

Mariano and his wife Jacinta have a three-month old son, Jamar Gerard.

On Januri 9, 1976, Bernhard A. Kalis joined Lago's Technical Department as an engineer. Initially he will work with the Energy Conservation Group. In this assignment Berhard will join several other engineers in
(Continued on page 5)

Mariano Christaans, Bernhard Kalis Ta Cuminza Traha den Technical Department como Ingeniero

Ariba Januari 7, 1976 Mariano Christiaans a drenta servicio di Lago como Ingeniero den Mechanical Engineering Division di Departamento Tecnico. Mariano a gradua for di Tulane University na December anja pasá, na unda el a obtene su grado di Bachiller den ingenieria mecanica.

El ta un graduado di St. Augustinus College di San Nicolas y a studia tambe na Colegio Arubano. El a traha pa varios firma promer cu el a drenta Tulane University na 1971, na unda originalmente el a studia cu un beca di Teagle Foundation y durante ultimo anja cu un ayudo financiero di Lago Scholarship Foundation.

Mariano inicialmente lo ta asigná den Technical Services Section unda el lo por aplica su habilidad den ingenieria mecanica pa yuda solucioná algun di e problemanan diario relacio-

na cu operacion di equipo.

Mariano y su esposa Jacinta tin un yiu homber di 3 luna cu yama Jamar Gerard.

Ariba Januari 9, 1976 Bernhard A. Kalis a drenta servicio di Lago su Departamento Tecnico como ingeniero. Inicialmente el lo bai traha cu e Grupo di Conservacion di Energia. Den e asignacion aki Bernard lo traha hunto cu varios otro ingeniero pa emprende estudios tocante energia di unidatnan di refineria. E estudionan aki ta forma parti integral di Lago su programa continuo pa conserva energia.

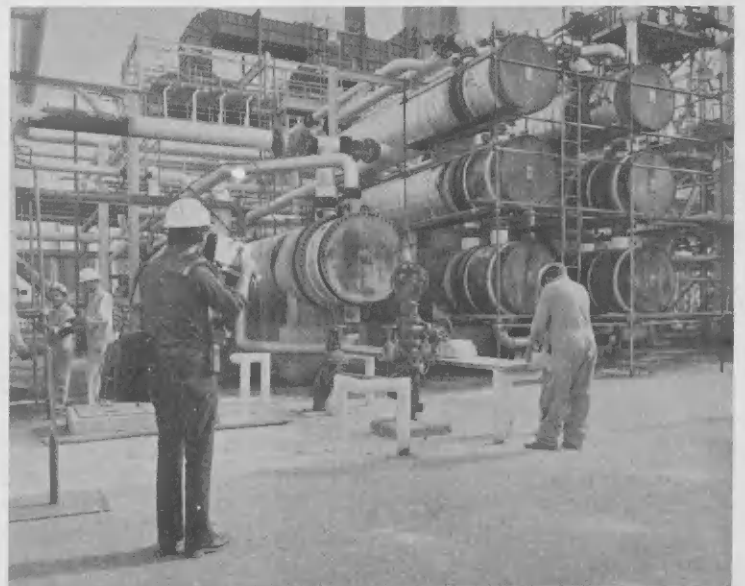
Bernhard a obtene su grado den Tecnologia Quimica for di Hogere Technische School na Den Haag na Juni 1975.

Como parti di su programa educacional pa obtene experiencia practi-

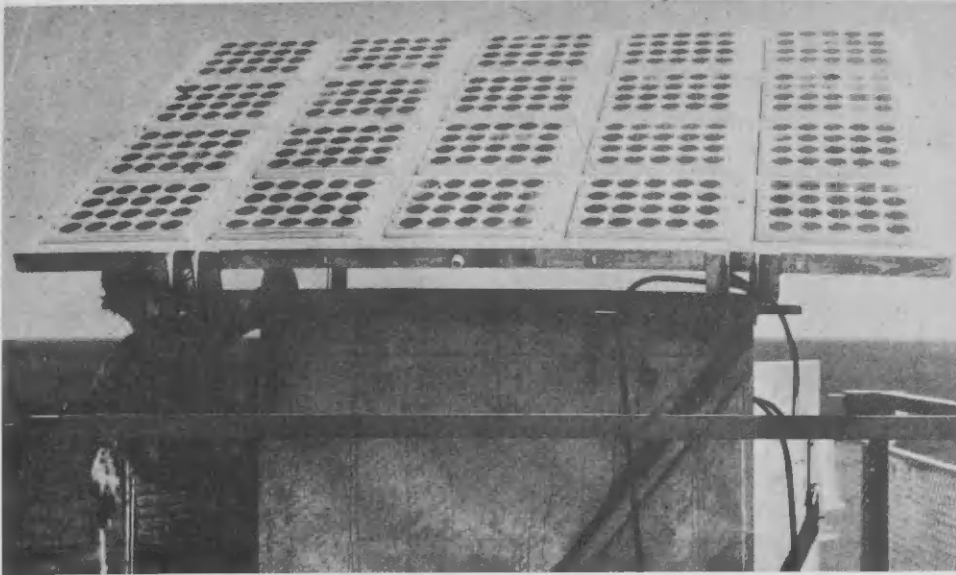
co, Bernhard a traha den Lago su Process Engineering Division for di Februari te Juli 1974 pa haya experiencia como ingeniero di contacto den varios operacionnan di refineria.



A film on Energy Conservation is being prepared for presentation to Lago employees. Jerry Francis here uses portable videotape equipment to film Marciano Angela at the ROC Center. At right, he captures a scene showing a Mechanical Tradesman doing insulation work on No. 5 Pipestill to improve efficiency in operations.



Un pelicula tocante di Conservacion di Energia ta ser prepara pa empleadonan di Lago. Jerry Francis aki ta usa un equipo portatil pa videotape Marciano Angela na ROC Center. Na drechi, el ta captura un escena mustrandó un empleado di Mechanical haciendo trabao di insulation ariba Pipestill No. 5 pa mehora eficiencia den operacion.



An array of solar cells provides power for a fog signal and obstruction lights on an oil platform in the Gulf of Mexico. The batteries in the container just below the array, operate the equipment at night.

Un formacion di celnan solar ta duna energia pa luznan di senjal di neblina y obstruccion ariba un plataforma di azeta den Golfo di Mexico. E baterianan den e caha just bao di e formacion di cel, ta opera e equipo anochi.

Un Fuente di Energia den Horizonte

Imagina Bo un fuente di energia cu no ta contamina ambiente, cu por provee por lo menos un parti di mundo su necesidad di energia economicamente pa semper. Claro cu un forma di energia asina lo ta ideal. Y e ta existi tambe.

Solo ta bombardeá Estados Unidos continental so, cu cantidadnan grandi di energia. A ser calculá cu e energia solar aki den 1974 tabata igual cu mas di 75 bez e cantidad di energia cu America ta consumí actualmente. Un poco di e energia aki por ser convertí den calor usando colectadornan di calor of den electricidad door di usa cristalan di silicon, e segundo elemento mas abundante den e capa rond di mundo. Ta e ultimo aki ta ofrece e desafio mas grandi pa tecnologia, ya cu otro forman di energia ta bira difícil pa haya.

Solo ta ofrece mas energia cu henter e mundo jamas lo tin mester. Y e energia aki ta limpi y gratis.

Anto, pakico nos no a cambia pa Energia Solar ?

E contesta, ironicamente, ta pasobra e ta mucho caro. Pasobra aunque energia solar ta liber den naturaleza, convirtiendo esaki den electricidad pa uso masal no ta comercialmente economico compará cu otro forman di energia.

Pero energia solar ta ser usá na lugarnan di mundo na unda otro medionan di potencia lo ta demasiado caro pa mantené y na unda potencia electrico comercial no ta disponible.

Un compania, situá na Wakefield,

Massachusetts, cu ta activamente envolví den e aplicacion comercial di potencia solar ta e Corporacion di Potencia Solar, un subsidiario di Exxon Enterprises.

Segun Lou Shrier, gerente di proyecto pa Exxon Enterprises y alavez un miembro di e junta di Corporacion di Potencia Solar, e compania ta probando activamente e mercadonan existente y ta trata di expandé nan.

"Reconociendo e potencia solar di energia como un fuente sin limite, nos kier miré ser poní den uso aki na mundo," Shrier a bisa. "Tambe nos ta realiza com caro e ta. Y pesey, mientras nos ta test e mercadonan pa potencia solar di awendia, nos ta haci investigaciones na Linden tambe pa busca sistemanan avansá cu podiser lo no bin den uso pa un década."

Pa provee potencia electrico barata den cantidadnan comercial, e investigacion lo mester vence dos problema inmenso — e costonan inicial y necesidad di lugarnan grandi pa colecta energia.

Energia Solar a ser usá hopi vez den espacio pa duna potencia na mas cu 600 satélite di Estados Unidos, incluyendo e estacion espacial di Skylab. Pero e cualidad especial di celnan di silicon tabata trahá na man y ta demasiado caro. (Electricidad ta ser produci ora cu un unidad di luz for di solo, yamá un "photon", ta dal ariba e cel creando un carga negativo y positivo).

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An Energy Source on the Horizon

Imagine a non-polluting energy source which can supply at least a part of the world's energy needs economically forever. Clearly, such a form of energy would be ideal. And it does exist.

The sun bombards just the continental United States alone with large amounts of energy. It is estimated that in 1974 this energy was equal to more than 75 times the amount of energy actually consumed by the country. Some of this energy can be converted into heat using thermal collectors, or electricity by using crystals of silicon, the second most abundant element in the earth's crust. It is the latter which offers the greatest technological challenge as other forms of energy become harder to find.

The sun offers more energy than the entire earth shall ever need. Clean energy. And free.

So why haven't we switched to solar energy ?

The answer, ironically, is because it's too expensive. For while solar energy occurs freely in nature, converting it to electricity for mass use is not commercially economical compared to other forms of energy.

But solar energy is being used — in areas of the world where other means of power would be too costly to maintain and where commercial electric power isn't available.

One company, located in Wakefield, Mass., which is actively involved in the commercial application of solar power is the Solar Power Corporation, a subsidiary of Exxon Enterprises. According to Lou Shrier, project manager for Exxon Enterprises, and a member of the board of Solar Power Corporation, the company is actively testing existing markets and seeking to expand them.

Recognizing the potential of solar energy as an unlimited source, we want to see it put to use here on earth," Shrier said. "We also recognize how expensive it is. So while we're testing the markets for solar power available today, we're also doing research at Linden to look at advanced systems which may not come into use for a decade."

To provide cheap electric power in commercial quantities, the research will have to overcome two immense problems — initial cost and the necessity for large areas for energy collection.

Solar energy has been used time and time again in space to power

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The above group of Mechanical Department employees completed a Metal Tradesman course last month and were presented certificates. The course was taught by F. T. Damian in the Mechanical Training Center in the Laboratories Building. A similar course is planned for another group this year.



M&C Division Superintendent L. S. F. Anjie presented the certificates to the men completing the course. At left, he hands a certificate to Ruperto Boekhoudt while at right, Roy Lacié receives his. Present at the short ceremony were Materials Division Superintendent Hap Young and Shops & Facilities Superintendent Guy Alexander.

Steve Macmanus Ta Bira Sucesor di Tom Keevan Como Controller di Lago Efectivo 1 di Februari

Efectivo Februari 1, 1976, Stephen (Steve) P. Macmanus lo sigui Tom J. Keevan como Controller di Lago. Sr. Keevan, kende tabata Controller di Lago desde 1969, lo asumi a posicion di Controller di International Petroleum, Ltd. na Bogota, Colombia.

Promer di a bini Lago, Sr. Macmanus tabata Gerente Financiero di Esso Standard Oil Co. S.A. (Uruguay) na Montevideo desde Maart 1975. El a principia su carrera na Exxon Juni 14, 1968 den Departamento di Controller di oficina principal di Exxon na New York. Siguientemente el a ser asigná como Systems Analyst den Oficina Principal di Humble Oil y despues a traha na Departamento di Controller di America Central di Esso Standard Oil S.A. na San Salvador como MCS Coordinator.

Na 1972, el a cambia pa Esso Inter-America (EIA) su oficina principal como Consehero den Controller su Ac-

counting Research & Practices Division y luego como Consehero MCS y Hefe di Division di Controller's-Financial Forecasts and Planning Division.

Un graduado di Artes Liberales di Universidad Notre Dame, na Indiana, na 1967, Sr. Macmanus a haya su grado di MBA (cu estudio principal den Finanzas) na Washington University na St. Louis na 1968.

Steve y su esposa Shai tin un yiu muher, Michelle, di 8 anja y un yiu homber, Daniel, di 6 anja.

Macmanus

(Continued from page 1)

as MCS Adviser and Division Head of the Controller's Financial Forecasts and Planning Division.

A Liberal Arts graduate from the University of Notre Dame, Indiana, in 1967, Mr. Macmanus earned his MBA degree (majoring in Finance) from Washington University in St. Louis, Mo., in 1968.

Steve and his wife Shai have an 8-year old daughter, Michelle and a 6-year old son, Daniel.

Buckley, Britten, De Souza Promoví

(Continuá di pagina 1)

Luego el a move pa e posicionnan di Houseman y a avanza pa Assistant Operator na 1964 den Cracking & Light Ends Department. El a haya promocion pa Operator na 1971.

Desde Maart 1973, Betty a actua varios bez como shift foreman. Tambe el tabata un Instructor di Entrenamento pa e plantanan di HDS-I y a asisti den startmento di e facilidadnan di HDS-I y HDS-II.

Na Lago, el a tuma cursonan den testmento di gas y Entrenamento Basico di Proceso.

Durante su tempo liber, Betty ta gusta sambuya y pisca y cultiva mata di fruta den su hoffi.

Betty y su esposa Elizabeth tin un yiu homber di 8 anja. Familia Britten ta biba na Tanki Leendert.

PHILIP DE SOUZA a cuminsa su empleo na Lago ariba Mei 2, 1975 como un Engineering Assistant B den Seccion di Inspeccion di Equipo di Mechanical Engineering Division.

Un graduado di School Tecnico John F. Kennedy, el a obtene su diploma como Tecnico di Welding for di Instituto Hulandes di Welding y Tecnologia na Den Haag. Na Lago el a sigui cursonan bao auspicio di compania, incluyendo Curso Metalurgico tocante "Corrosion" y tambe Diseño di Seguridad, Testmento No-Destructivo y pa Scirbi Ingles Eficazmente.

Na Juli 1974, Philip a haya promocion pa Engineering Assistant A.

Promer di a bini Lago, el a obtene experiencia di trabao mientras trahando pa Chicago Bridge y Ralph M. Parsons den terreno di Lago unda el a ocupa e puestonan di Welder Primera Clase pa Tuberia y Tanki y Inspector di Welding. Tambe el a traha cu Curaçao Drydock Co. como Instructor di Welding promer di cuminsa na Lago.

Su pasatempo favorito ta inclui bowling, hunga domino y pool. Philip y su esposa Ambar tin un yiu homber di 4 luna. Nan ta biba na Cura Cabai.

Christiaans, Kalis

(Continued from page 3)

conducting refining unit energy surveys. These surveys are an integral part of Lago's continuing program to conserve energy.

Bernhard received his degree in Chemical Technology from the Higher Technical School at The Hague in June 1975.

As part of his educational program to obtain practical experience, Bernhard worked in Lago's Process Engineering Division from February to July 1974 to gain contact engineering experience in various refinery operations.



Ismael Wolter of Controller's-Office Services is presented with his 30-year emblem and certificate on the occasion of his anniversary December 19.



Julio Dania of Mechanical - Materials is congratulated by Division Superintendent Hap Young who hands him his 30-year emblem and certificate Jan. 10.



Norman N. Pantophlet of Process-Utilities completed 25 years of Company service on December 5 and was presented his service watch.



Federico Tromp of Technical-Lab. Inspection Section, accepts his 25-year service watch on his anniversary December 14.



Emmanuel Oduber of Process-Fuels is congratulated by Fuels Superintendent Jorge Aviles who hands him his 25-year service watch December 23.



Earlin Nedd of Technical-Lab. Inspection is handed his 25-year service watch on his anniversary January 8.

Un Fuente di Energía

(Continúa di pagina 4)

Como parti di e programa solar nacional, investigacion pa un metodo pa produccion masal di celnan di silicon ta ser conduci den un esfuerzo pa rebaha e costo te na algo menos cu un dollar pa watt for di e actual costo \$20, pa haci potencia solar competitivo cu otro formanan di energia.

E segundo problema, sinembargo, por ta mas dificil di vence si energia solar lo bai ser usá ariba un escala masal. E energia solar ta asina plamá cu e lo requeri pa instala colectadornan ariba un área masha grandi pa colecta suficiente cantidad pa duna potencia electrico pa aparatonan grandi of pa casnan completo.

E unidad of módulo básico di e Corporacion di Potencia Solar, cu ta contene cinco disco chikito di 2.17 duim den diametro conectá den serie of paralel, tin mas cu 1 pia largo y mas of menos 3 duim hancho. E módulo ta capaz di produci 1.5 watt di electricidad na eficiencia maximo

den luz di solo directo, y lo mester di un gran cantidad di módulonnan pa un solo instrumento chikito.

Un aire-acondicionador di 1000 watt, por ehempel, lo requeri 667 di e módulonnan aki operando ariba un eficiencia maximo.

Sr. Shrier ta admití cu pa mayoría di e aplicacionnan usando tecnologia actual mas avanzá, potencia solar ta demasiado caro. Pero e tin algun aplicacion cual ta ser explorá pa Corporacion di Potencia Solar.

"Potencia solar awendia ta deseable pa instrumentonnan den lugarnan remoto, na unda hibamento di combustible of mantencion lo ta dificil y podiser mas costoso ariba un periodo largo cu e costo inicial di equipo solar," Shrier a bisa.

Un sitio na unda viahe regular pa hiba combustible ta costoso ta e Golfo di Mexico. Pa e ultimo 3 año, un señal di nublina y cuatro luz indicandando obstruccion te 3 milla di distancia ta ser operá ariba potencia solar. Energia solar ta dal ariba 80 panel

colectador pa generá 120 watt di electricidad maximo cual ta duna energia necesario durante oranan di dia mientras cu e ta carga e baterianan pa uso anochi tambe. E baterianan ta capaz pa duna corriente pa un periodo extenso, en caso cu un tempestad cu ta dura varios dia rebaha e cantidad di energia cu ta ser colectá.

Otro aplicacionnan pa energia solar actualmente ta inclui equipo di señal di ferrocarril y stacionnan cu ta repiti señal y interesadamente un receptor di television cu ta duna programanan educativo pa estudiantenan na school den un parti remoto di Africa. Un aplicacion basta nobo ta e unidad di seis módulo cu lo tene bateria di un boto constantemente cargá.

(E articulo aki ta tumá for di Exxon Manhattan).

Cu e solo tropical constantemente ariba nos isla, Aruba lo por bira un lugar ideal di experimento pa e futuro fuente di e energia aki.



These men are enjoying their lunch at one of the six white formica-covered tables in the Finger Pier Lunch Shelter. In the background, near one of the entrances, a row of lockers can be seen.

E empleadonan aki ta disfrutando di nan cuminda sintá na un di e diez mesanan blanco cubri cu formica na Finger Pier Lunch Shelter. Parti patras, cerca di uno di e entradanan e lockernan pa warda cuminda por ser mirá.

Mechanical Field Workers, Dock Personnel Boast Largest Lunch Room Facilities in the Refinery

Located southeast of Gate # 2, near the harbor fence and across the refinery main road, is the largest lunch shelter in the refinery. Called the Finger Pier Lunch Shelter, this building had previously served as the Fire Truck Garage which included a locker room for garage personnel. A partially open area covered with a roof, the building was renovated last year and converted into a lunch area and locker room facilities to provide a more convenient and neater environment for Mechanical field workers and dock personnel working in the area.

To accomplish this purpose, the open portion of the building was blocked off and two glass panel doors leading to the lunch area were installed. Existing windows were modified to permit the installation of airconditioned units, while the walls, door frames and floor were re-conditioned and repainted.

The spacious lunch area now has six long tables, with seating accommodations for sixty men. Against one wall there is a row of green formica-covered cabinets, with counters for hot plates or coffee pots; a water cooler; a double sink and two lavatories where the men can wash up before having lunch, and a mirror on the wall. A refrigerator will soon be installed against this wall.

On the opposite wall there are sixty food lockers where employees can store their lunch bags, thermos bottles, coffee cans and other personal

belongings.

Adjacent to the room, but with separate entrances from the outside, are two locker rooms where the men can change into work clothes and keep their personal effects.

Renovation of the Finger Pier Lunch Shelter is part of Lago's continuing efforts to improve working environment. Smaller facilities, some of them in combination with offices, are located in the various refinery areas. Where necessary — due to environmental problems, these shelters have been airconditioned. In addition to these permanent facilities, a mobile shelter is stationed wherever there is a high concentration of



One area of the Lunch Room is provided with drinking and washing facilities.

Un parti di e comedor tin e facilidatnan pa bebe awa y pa laba man y coi kibra.

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activity during turnaround work or other projects.



This is the Finger Pier Lunch Shelter which serves as a temporary "haven" for Mechanical field workers and dock personnel at lunch time.

Esaki ta e Finger Pier Lunch Shelter cual ta crea un sorto di "ambiente" temporario pa trahadornan den field y personal di dok ora di come.

Farewell Party for Controller Tom Keevan at the Esso Club January 23



Un grupo grandi di miembro di gerencia tabata presente na Esso Club ariba Diabierna, Januari 23 pa yama Controller Tom J. Keevan ayo. Sr. Keevan a ser nombrá Controller di International Petroleum Ltd. na Bogota, Colombia. Ariba e portretnan aki, Sr. Keevan ta ser muestra den agradable conversacion cu coleganan, empleadonan y amigonan.



A large group of management members were on hand at the Esso Club on Friday, January 23 to bid farewell to Controller Tom J. Keevan, who has been named Controller of International Petroleum Ltd. in Bogota, Colombia. In these pictures, Mr. Keevan can be seen in pleasant conversation with colleagues, employees and friends.



An Energy Source

(Continued from page 4)

more than 600 United States satellites, including the Skylab space station. But the space-quality silicon cells were made by hand and are prohibitively expensive. (Electricity is produced when a unit of light from the sun, called a photon, strikes the cell creating a positive and negative charge.) As part of the national solar program, research on a method for mass production of the silicon cells is being conducted in an effort to lower the cost to something less than a dollar a watt from the present \$20 to make solar power competitive with other forms of energy.

The second problem, however, may be more difficult to overcome if solar energy is to be used on a massive scale. The sun's energy is so diffused it would require energy collectors spread over a substantial area to collect sufficient amounts to power major appliances or entire homes.

Solar Power Corporation's basic unit or module, which contains five

2.17-inch diameter wafers wired in series or parallel, is more than a foot in length and about three inches wide. The module is capable of producing 1.5 watts of electricity at maximum efficiency in direct sunlight, necessitating a large number of modules for even a small appliance.

A 1,000-watt air conditioner, for example, would require 667 of these modules operating at peak efficiency.

Shrier admits that for most applications using the most advanced present technology, solar power is prohibitively expensive. But it does have some applications which are being explored by Solar Power Corporation.

"Solar power today is desirable for instruments in remote areas where refueling or maintenance would be difficult and perhaps even more costly over a period of time than the initial cost of the solar equipment," said Shrier.

One area where regular refueling visits are costly is the Gulf of Mexico. For the last three years, a fog signal and four three-mile obstruction

lights have been operating on solar power. Energy from the sun strikes 80 collector panels to provide 120 watts of peak power which provides the necessary power during the daylight hours while charging the batteries for use at night. The batteries are capable of providing power for an extended period should a storm lasting several days cut down on the amount of energy being collected.

Other applications for solar energy at this time include railroad grade crossings, other railroad signal equipment requiring low power, radio repeater stations and, interestingly, a television receiver bringing educational programs to students in a school in a remote part of Africa. A fairly new application is a six-module unit which will keep a pleasure boat's battery constantly charged.

(From: Exxon Manhattan).

With the tropical sun constantly over our island, Aruba would be an ideal experimental site for this future energy source.